



Dylan G. Serpas, M.S., & Kemesha Gabbidon, Ph.D., M.P.H.  
Department of Psychology, University of South Florida

## Introduction

- Cardiovascular diseases (CVDs) are the leading cause of morbidity and mortality nationwide.
- Separate bodies of research indicate that Lesbian, Gay, and Bisexual (LGB) and Black, Indigenous, and people of color (BIPOC) demonstrate a disproportionately higher risk for CVDs, with discrimination supported as one mechanism.
- BIPOC and LGB compared to whites and heterosexuals show poorer health risk knowledge, yet whether differences exist between Lesbian/Gay and Bisexuals is largely unknown.
- Knowledge of heart attack and stroke risk are relevant as these conditions represent significant clinical events requiring substantive intervention.
- When LGB people are compared to heterosexual counterparts, greater odds for CVD RFs are demonstrated among Bisexual people.
- Within LGB communities, Bisexuals report unique monosexism from society; this may increase risk for higher CVD risk factor (RF) burden compared to heterosexual, Lesbian, and Gay counterparts.

### Hypotheses

- **H1:** Bisexual BIPOC will demonstrate lower odds for awareness of heart attack and stroke symptoms compared to Lesbian/Gay BIPOC.
- **H2:** Bisexual BIPOC will show greater odds for self-reported CVD RFs compared to their Lesbian/Gay BIPOC counterparts, after accounting for covariates.

## Method

### Participants

- 520 self-identified Lesbian/Gay (64.2%), Bisexual (35.8%), and BIPOC (majority Hispanic and Black) persons whose ages ranged from 18 to 85 ( $M = 39.26$ ,  $SD = 14.66$ ).
- 42.1% males, 57.9% females.
- Non-Hispanic White and heterosexuals excluded.

### Procedure

- The NHIS is an annual nationally representative health survey conducted in the US among civilian noninstitutionalized persons.
- 2017 and 2017 NHIS datasets combined due to study variable availability.

## Measures

### Demographics

- Age, sexual identity, healthcare access/utilization, health information technology use

### Self-Rated CVD Risk Factors

- Hypertension, high cholesterol, diabetes, current tobacco use, current CVD (heart attack, stroke, angina, coronary heart disease, heart conditions/disease, COPD, emphysema).

### Awareness of Heart Attack and Stroke Symptoms

- **Heart Attack Symptom Awareness** A count variable was created (0-5) where completing all items correctly was considered having awareness. Sample items included: Jaw, neck, or back pain; Feeling weak, lightheaded, or faint. ( $n_{\text{aware}} = 215$ ; 44.2%) ( $\alpha = .771$ )
- **Stroke Symptom Awareness**. A count variable was created (0-5) where completing all items correctly was considered having awareness ( $n_{\text{aware}} = 329$ ; 67.7%) ( $\alpha = .783$ ).

For each symptom cluster, participants rated the best course of action when someone is suspected of a heart attack or stroke. 911 was the correct response ( $n_{\text{correct heart attack}} = 492$ ; 94.6%;  $n_{\text{correct stroke}} = 505$ ; 97.1%)

### Data Analysis Plan

Study hypotheses were conducted using binary logistic regression. Odds ratio were calculated to compare the likelihood for each binary outcomes between Lesbian/Gay and Bisexual BIPOC participants. Complex Samples Design was used for appropriate variance estimation and to account for the complex survey design of the NHIS.

## Results

**Table 1.** Binary Logistic Regression Analyses for Heart Attack and Stroke Awareness and CVD Risk Factors

	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
<b>Heart attack symptoms</b>			
Aware of all symptoms	2.44(0.76-7.83)	2.80(0.80-9.83)	<b>4.31(1.24-14.92)*</b>
Bisexuals			
Call 911 if heart attack symptoms	1.16(0.40-3.37)	1.33(0.41-4.29)	1.35(0.50-3.66)
Bisexuals			
Aware of heart attack symptoms and correct action	<b>2.75(1.37-5.49)**</b>	<b>2.65(1.20-5.84)*</b>	<b>3.42(1.58-7.43)**</b>
Bisexuals			
<b>Stroke Symptoms</b>			
Aware of all symptoms	1.51(0.33-7.02)	1.94(0.53-7.16)	2.14(0.69-6.63)
Bisexuals			
Call 911 if stroke symptoms	2.70(0.63-11.55)	2.98(0.60-14.61)	3.35(0.87-12.98)
Bisexuals			
Aware of stroke symptoms and correct action	<b>2.77(1.49-5.16)**</b>	<b>2.44(1.20-4.99)*</b>	<b>3.03(1.38-6.65)**</b>
Bisexuals			
Diabetes diagnosis	0.99(0.34-2.87)	0.65(0.22-1.96)	-
Hypertension diagnosis	1.71(0.86-3.38)	1.18(0.60-2.33)	-
Current tobacco use	0.81(0.44-1.49)	0.86(0.48-1.54)	-
Obese (BMI > 29)	1.15(.70-1.89)	1.13(0.80-2.21)	-
High cholesterol diagnosis	0.78(.36-1.71)	0.98(0.43-2.25)	-
CVD diagnosis	1.45(.83-2.53)	1.20(0.66-2.19)	-

Note. OR = Odds Ratio

Model 1: unadjusted model

Model 2: controlled for age, sex, income, education

Model 3: added healthcare access (coverage, seen provider) and utilization, HIT use, CVD RFs, and CVD history

Lesbian/Gay = reference group

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

## Discussion

- This study compared odds for CVD RFs and heart attack and stroke symptom knowledge between Lesbian/Gay and Bisexual BIPOC.
- Contrary to predictions, Bisexual BIPOC participants (compared to Lesbian/Gay BIPOC participants) generally did not show higher odds for neither CVD RFs nor symptom awareness.
- Bisexual BIPOC showed higher odds for simultaneous symptom awareness and correct action.

Finding suggest greater health awareness among Bisexual BIPOC and do not support Bisexual disparities in this nationally-representative dataset.

### Limitations

- BIPOC and Lesbian/Gay identities were as examined as monoliths.
- Dimensions of Bisexuality (e.g., monosexism) and sexuality (e.g., sexual behavior) were not considered.
- This study did not examine possible mechanisms.

### Implications

- Important to capture sexual orientation, gender identity, and gender expression and identify CVD risk and prevalence for LGBTQ BIPOC, namely Bisexual BIPOC.
- Researchers should extend past traditional biomedical frameworks of CVD risk and recognize the contribution of intersectional minority stress as a mechanisms for CVD disparities across racial/ethnic groups at the nexus of sexual identity.
- Investigating mechanisms of strength and resilience for LGBTQ are of equal importance.
- National surveys have the capacity to study include measures of intersectional discrimination and marginalization to capture possible mechanisms in CVD disparities.

## References

Available upon request: [dserpas@usf.edu](mailto:dserpas@usf.edu)